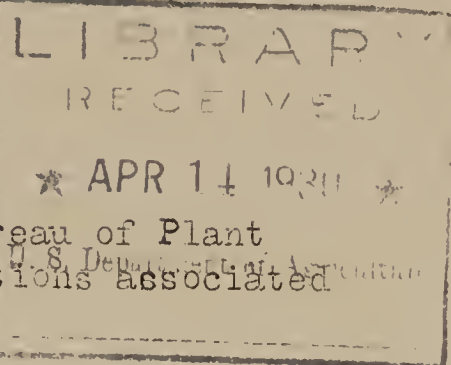


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A radio talk by W. R. Beattie, horticulturist, Bureau of Plant Industry, delivered through Station WRC and 35 other stations associated with the National Broadcasting Company, April 1, 1930.

On previous occasions, I have mentioned the fact that certain varieties of fruits are self-sterile, that is, they do not set fruit with their own pollen, therefore, require to be cross-pollinated by some other variety. There are a number of well established points in connection with fruit pollination. First, that the pollen of orchard fruits is sticky, and must be carried by insects from one flower to another, and that the wind plays little or no part in the cross-pollination process. Second, as I have already stated, many varieties do not set fruit when pollinated with the same variety making it essential that suitable pollinating varieties be provided in the orchard. Third, that in many cases it is not only desirable, but necessary, to provide insects for cross-pollination purposes. It is further shown that the natural or wild insects cannot, as a rule, be depended upon to do this work, and that the honeybee is the best insect at the disposal of orchardists as a cross-pollinizer.

The recent report of the New York State Horticultural Society contains an interesting article by Dr. E. F. Phillips of the College of Agriculture at Ithaca on "The Management of Bees for Pollination." Dr. Phillips calls attention to the fact that in order to get effective pollination, it is necessary not only to have stands of bees in or near the orchard, but that the colonies must be strong, and that the same factors involved in successful honey production are equally true in the keeping of bees for pollination purpose.

According to results obtained by Professor L. H. Mac Daniels of New York State College of Agriculture certain varieties of apples such as McIntosh should not be planted in blocks but at least every third row should be a pollinizer, Oldenburg for example. Weather conditions are after all the most important factor in fruit pollination and no matter how many bees are provided if the weather is unfavorable for their flight throughout the blooming period the set of fruit will be light. In one case cited where there was only one good day for pollination during the blooming period and even the second row of trees from the pollinizer only bore a half crop and the third row but one-fourth of a crop. Wherever the number of pollinizer trees is insufficient Prof. Mac Daniels recommends the placing of large bouquets, or branches of some variety which will supply pollen, high up among the branches of the trees to be pollinated. In some cases these bouquets have given almost perfect pollination. After all, the weather condition at blooming time is the important factor but orchardists should provide for an adequate supply of pollen also the necessary bees to distribute it.

It has frequently been suggested that a stand of bees be provided for each acre to be pollinated, but if this should prove to be a weak colony, it would not pollinate a single acre, while a strong colony might take care of 5 or 6 acres. It is pointed out that all of the principles of good bee-keeping must be followed by the orchardist if he expects to be successful in the matter of securing proper pollination. The time has come when the fruit grower must be a good beekeeper, control the diseases of bees, properly carry his colonies through the winter, and be a honey producer in order that he may have a dependable working army of bees to assist in his fruit pollination.

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The southern members of the radio audience may be interested to know that the rearing of queens and the production of bees for shipment to northern sections has become quite an industry in parts of the South where the long season and mild winters make the problem of building up strong colonies a comparatively easy one. Bees are now shipped by the pound from southern bee producers to northern beekeepers.

The application of nitrate of soda or some other form of highly available nitrogen to fruit trees about 2 to 3 weeks before the trees blossom has a wonderful effect in stimulating the set of fruit. Three to eight pounds per tree, according to the size, age, and kind of tree, is recommended. The time for making the application will depend upon locality, but as already stated should be 2 to 3 weeks in advance of blooming. The usual method of applying the nitrate is to sow it broadcast in a broad band under the branches of the tree and extending about 3 feet beyond the tips of the branches. Nitrogen may be applied to apples, peaches, cherries, and plums, but its use with pear trees is liable to produce blight.